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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/991,846 | 11/16/2001 | Wen-Lung Liu | LEL1 3448 | 9262 |
| 321 | 7590 | 10/31/2003 | EXAMINER | |
| SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102 | | | EASTHOM, KARI, D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2832 | |

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,846

Applicant(s)

LIU, WEN-LUNG

Examiner

Karl D Easthom

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, it is not clear if "the both ends" on line 8 refers to "two ends" on line 6, and/or if "two ends" refers to the "two ends" on line 3. In claim 5, it is not clear which "the ends" refers. In claim 4, "preferably" is unclear as either limiting or exemplary.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).
4. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by McGuire et al. '391. McGuire discloses the claimed invention at Fig. 9G with raw material substrate 20, insulating layer 120, and terminal electrodes 150, 180. There are at least five conducting surfaces depicted, two for each of the three planar layers shown. Moreover, there

are at least five including surfaces on the sides of the device and wrapping around the ends, created by the dipping or plating disclosed at col. 11, lines 50-66¹. In claim 5, the ends are exposed and in claim 6, the foils are insulated by the insulating layers covering the edges in part. In claim 3, there are two foil layers.

5. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Barrett et al. '997. Barrett et al. '997 discloses the claimed invention at Fig. 11 with raw material substrate 62, insulating layer 42, and terminal electrodes 66,68. There are at least five conducting surfaces depicted, two for each of the three planar layers shown. Also, the edges create at least six more conducting surfaces. In claims 3-4, the three layers and multiple foil layers are depicted. In claim 5, the ends are exposed and in claim 6, the foils are insulated by the insulating layers covering the edges in part, such as the edges shown in the Fig. 11 view.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al. '391 or Barrett et al. '997, as applied to claims above, further in view of Burke et al. The invention is disclosed as noted above except the paste. Burke discloses a paste silver layer 22 for a thermistor disclosed for use with soldering including a tin and lead layer formed for ideal soldering characteristics for mounting on circuit boards, as disclosed at col. 4, lines 1'-

¹For evidence that dipping inherently creates six surfaces, see 'Figs. 1-4 of Inoue JP'106.

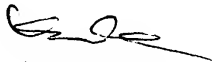
24, such that such a termination would have been obvious, since each reference discloses circuit board mounting.. A tin/lead alloy is disclosed at col. 12, lines 5-12 of McGuire et al. for soldering .

8. Applicant's arguments filed 9/17/200 have been considered but they are not persuasive. Applicant argues that there are not five exposed surfaces. This is not correct. Applicant ignores the finite thickness of the layers which leaves 6 exposed side surfaces, and three other exposed flat larger surfaces, for the three layers depicted for McGuire and Barrett. For example, the exposed section is disclosed in cross section (68) at Fig. 12 in Barrett and is also seen at Fig. 11., where each electrode 68 has 9 exposed surfaces. Similar remarks apply to the other patents. As to no motivation to combine Burke because NTC and PTC are different, this is not persuasive. The motivations are supplied above, and the resistors are both in the limited class of thermistors.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Easthom whose telephone number is (703)308-3306. The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad, can be reached on (703)308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


KARL D. EASTHOM
PRIMARY EXAMINER